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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/780,665	02/08/2001	Clay H. Fisher	50N3698.01/1564	7904
24272	7590	06/02/2005	EXAMINER	VIEAUX, GARY
Gregory J. Koerner Redwood Patent Law 1291 East Hillsdale Boulevard Suite 205 Foster City, CA 94404			ART UNIT	PAPER NUMBER
			2612	DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/780,665	FISHER ET AL.
	Examiner	Art Unit
	Gary C. Vieaux	2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 21 December 2004.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-42 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-6,8-26 and 28-42 is/are rejected.
 7) Claim(s) 7 and 27 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Amendment

The Amendment filed on December 21, 2004 has been received and made of record. In response to the first office action, claims 1, 4, 8, 11, 21, 24, 28, and 31 have been amended.

Effective Filing Dates

On March 6, 2000, Applicant filed a Provisional Application consisting of two pages. Page one was comprised of the following text:

50N3698
PROVISIONAL APPLICATION
VIDEO STREAM STITCHING
15 DETAILED DESCRIPTION OF THE INVENTION
(See attached page)

-1-

20

Page two was comprised of the following text/images:

Video stream stitching

25 Video stream stitching - Method and apparatus to create a still image from a video stream.

Problem 1:

There is no way for a user to construct a still image from a video stream if the camera is moving.

Problem 2:

30 There is no way to use a camera as a document scanner for random sized documents.

Problem 3:

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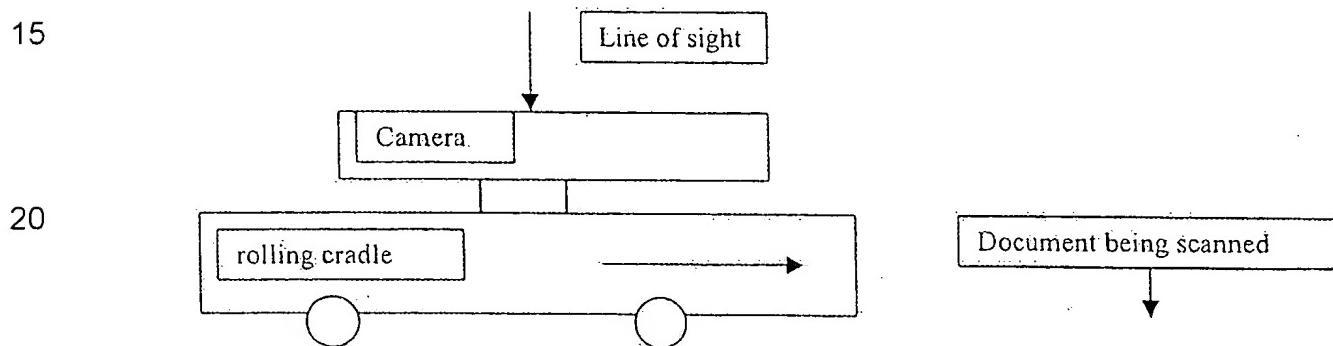
Stitching systems based on still images require some sort of indexing method to capture still images at proper intervals.

5 The user captures a video of a scene while remaining stationary and moving the camera.

A user places the camera in a rolling cradle that is moved over the surface of a document while in video capture mode. The invention can create a still image of the entire document from the resultant video data.

10 Alternatively the user can create the video clip and then use a separate software application to convert to a still image. Alternatively the video can be uploaded to a network or an online service for the conversion.

The cradle may store position and rotation speed data (from the rolling of the wheels) for use in constructing the still image.



25 **Key advantage 1**

The user can scan documents of any size with a simple technique.

Key advantage 2

A single cradle size can be used for any size document.

Key advantage 3

30 No indexing method is required to capture images at proper intervals to create a large still image.

- 2 -

35 MPEP § 706.02.V (D) states "[i]f the application properly claims benefit under 35 U.S.C. 119(e) to a provisional application, the effective filing date is the filing date of the provisional application for any claims which are fully supported under the first paragraph of 35 U.S.C. 112 by the provisional application."

Regarding amended claim 1, Response p. 2, filed on December 21, 2004, recites
“[a] system for creating a still image of a target object by utilizing a video camera,
comprising: a support device configured to transport said video camera across said
target object during a scanning procedure to capture a contiguous frame sequence of

- 5 video data corresponding to said target object; and a scanning manager coupled to said
video camera for analyzing scan motion data from said scanning procedure, and
responsively extracting still frames from said contiguous frame sequence in a non-
sequential manner to represent said target object as said still image.”

After review of the provisional application, nowhere within the disclosure was
10 subject matter found to fully support “a scanning manager coupled to said video camera
for analyzing scan motion data from said scanning procedure, and responsively
extracting still frames from said contiguous frame sequence in a non-sequential manner
to represent said target object as said still image”, as recited in amended claim 1, which
would reasonably convey to one skilled in the relevant art that the inventors had
15 possession of the claimed invention at the time the provisional application was filed, as
required by 35 U.S.C. 112, first paragraph. Therefore, amended claim 1 is only entitled
to the effective filing date of February 8, 2001, which is the current effective filing date of
the non-provisional application.

Furthermore, as amended claim 1 is not found to be fully supported within the
20 provisional application as required by MPEP § 706.02.V (D), further discussion
regarding explicit support for limitations within dependent claims is moot.

Regarding amended claim 21, Response p. 6, filed on December 21, 2004, recites a method analogous to the limitations found within claim 1, and therefore for the reasons stated above, claim 21 and all dependent claims therefrom are only entitled to the effective filing date of February 8, 2001, which is the current effective filing date of

5 the non-provisional application.

Regarding amended claim 41, Response p. 10, filed on December 21, 2004, recites claim 41 to be directed to a computer-readable medium comprising program instructions, and to which any similar reference to such language is not found within the provisional application as filed. Therefore, as claim 41 is not fully supported within the

10 provisional application as required by MPEP § 706.02.V (D), claim 41 is only entitled to the effective filing date of February 8, 2001, which is the current effective filing date of the non-provisional application.

Response to Arguments

15 Applicant's arguments with respect to claims 1-6, 8-26, and 28-41 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments, see Remarks p. 16, filed December 21, 2004, with respect to claims 7 and 27 have been fully considered and are persuasive. The 35 U.S.C. 103(a) rejections of claims 7 and 27 have been withdrawn.

20 Applicant's arguments filed December 21, 2004, in relation to claim 42 have been fully considered but they are not persuasive.

Regarding claim 42, Applicant submits, on pages 13-14 of the Remarks, that the Dunton reference (US 6,304,284), in light of the specification, does not anticipate or make obvious the Applicant's invention as provided for by the "means-plus-function" language of the claim. The Examiner respectfully disagrees.

- 5 The language of claim 42 is as follows: "A system for creating a still image of a target object by utilizing a video camera, comprising: means for transporting said video camera across said target object during a scanning procedure; means for analyzing scan motion data from said scanning procedure; and means for generating still frames corresponding to said target object.
- 10 First, the Specification provides means for transporting said video camera across said target object during a scanning procedure that includes a reflective device that "may be utilized to perform a scanning procedure (p. 12 lines 5-9), as well as expressly providing for alternative embodiments that "may readily include various other components and functionalities in addition to, or instead of, those components and
- 15 functionalities discussed in conjunction with the FIG. 5 embodiment" (p. 5 lines 8-11), and may be implemented using any other configuration (p. 12 lines 1-2.)
- Correspondingly, the Dunton reference provides means for transporting said video camera across said target object during a scanning procedure (col. 4 lines 49-64) that includes transporting a camera across a target via rotational movement, the employs a
- 20 mirror to record surrounding images (also see Fig. 3A.) Second, the Specification provides means for analyzing scan motion data from said scanning procedure that includes a control module incorporating a CPU that may be implemented to include any

appropriate microprocessor device (p.8 lines 14-24), as well as expressly allowing for a control module that "may readily include various other components in addition to, or instead of, those components discussed in conjunction with the FIG. 3 embodiment" (p. 8 lines 20-22.) Correspondingly, the Dunton reference provides means for analyzing

- 5 scan motion data from said scanning procedure (col. 6 lines 20-23) that includes a processor or processing unit. Finally, the Specification provides means for generating still frames corresponding to said target object that includes a control module incorporating a CPU to process still frames of video data into a corresponding still image (p.8 lines 14-24; p. 9 lines 1-26.) Correspondingly, the Dunton reference
- 10 provides means for generating still frames corresponding to said target object (col. 4 lines 26-30) that includes a processing unit that combines images from a video camera into a single image.

Based on the foregoing comparisons, it is demonstrated that each of the limitations of the instant application, as claimed and written, are also found within the

- 15 Dunton reference, and therefore the 35 USC 103(a) rejection to claim 42 is maintained by the Examiner.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

5 The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-40 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter 10 which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Amended claims 1 and 21 (Remarks p. 2 and 6, respectively), filed on December 21, 2004, call for the extraction of "still frames from said contiguous frame 15 sequence in a non-sequential manner". Review of the Specification indicates support for extraction of still frames at predetermined time intervals (Spec. p. 6, line 20), extraction of a series of still frames (fig. 6, Spec. p. 12 lines 24-30), extraction of a series of still frames (fig. 7, Spec. p. 14 lines 6-8), and generation and combination of sequential pairs of still frames (Spec. p. 18 lines 6-8), but the Specification is not found 20 to provide full support for the claim language as currently written, with particular emphasis directed towards locating clearly written support for the limitation of "non-sequential".

Claims 2-20 and 22-40 are dependent directly or indirectly to claims 1 and 21, respectively, and therefore are subject to the limitations included therein.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

5 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10 **Claims 1-4, 19-24 and 39-40** are rejected under 35 U.S.C. 103(a) as being unpatentable over Dunton et al. (US 6,304,284) in view of Chen (US 6,552,744.)

Regarding claim 1, Dunton teaches a system for creating a still image of a target object by utilizing a video camera, comprising: a support device (col. 4 lines 49-57) configured to transport said video camera (col. 2 lines 22-23) across said target object 15 during a scanning procedure (fig. 1A; col. 2 lines 50-53) to capture a contiguous frame sequence of video data corresponding to said target object (capture of a contiguous frame sequence of video data is inherent to the operation of a video camera), and a scanning manager coupled to said video camera for analyzing scan motion data from said scanning procedure, and responsively generating still frames corresponding to said 20 target object to form a composite image (fig. 1A indicator 140; col. 4 lines 25-34).

However, Dunton does not disclose responsively extracting still frames from said contiguous frame sequence in a non-sequential manner to represent the target object as a still image.

Nevertheless, Chen discloses a video camera (col. 2 lines 59-60) and program 25 code employed to combine discrete images into a single image (fig. 3) wherein redundant frames are discarded during a stitching process (col. 5 lines 14-16, in which

the term non-sequential is interpreted to mean frames that were not captured directly adjacent.) It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the stitching process as taught by Chen with the system as taught by Dunton, so that discrete images could be captured at a normal video capture rate

5 ('744 – col. 5 lines 14-16.)

Regarding claim 2, Dunton and Chen disclose all of the limitations of claim 2 (see the 103(a) rejection to claim 1 supra), including disclosing a system wherein a stitching software program combines said still frames to produce said still image, said stitching software program residing on one of said video camera ('744 – col. 2 lines 44-51) and

10 an external computer device ('284 – col. 4 lines 25-34, col. 6 line 20 – col. 7 line16.)

Regarding claim 3, Dunton and Chen disclose all the limitations of claim 3 (see the 103(a) rejection to claim 1 supra), including disclosing a system wherein said target object includes one of a document, a photographic image, a physical object, a graphics image, and a geographic location ('284 – fig. 1A.)

15 Regarding claim 4, Dunton and Chen disclose all the limitations of claim 4 (see the 103(a) rejection to claim 1 supra), including disclosing a system wherein a motion detector generates said scan motion data by monitoring said support device during said scanning procedure, said scan motion data including a scan speed and a scan direction ('284 – col. 3 lines 26-28, col. 4 lines 57-62.)

20 Regarding claim 19, Dunton and Chen disclose all the limitations of claim 19 (see the 103(a) rejection to claim 1 supra), including disclosing a system wherein said video camera performs a reiterative combination procedure, said reiterative combination

procedure repeatedly combining an immediately-preceding one of said still frames and a current one of said still frames to generate said still image ('284 – col. 6 line 20 – col. 7 line 51.)

Regarding claim 20, Dunton and Chen disclose all the limitations of claim 20 (see

- 5 the 103(a) rejection to claim 1 supra), including disclosing a system wherein said scanning procedure is performed by one of a moving video camera process ('284 – fig. 1A and 1B), a moving target object process, and a stationary camera-stationary target process that utilizes a moving scanning reflector element ('284 – fig. 3A.)

Regarding claims 21-24 and 39-40, although the wording is different, the material is

- 10 considered substantively equivalent to claims 1-4 and 19-20, respectively, as discussed above.

Claims 5-6, 8-11, 14, 25-26, 28-31 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dunton et al. (US 6,304,284) and Chen (US 6,552,744), in

- 15 further view of Kaye (US 5,497,188.)

Regarding claim 5, Dunton and Chen disclose all the limitations of claim 5 (see the 103(a) rejection to claim 1 supra), except for a direct teaching a system wherein said support device includes a cradle that is initially positioned at a starting index of a scan track to allow said video camera to frame said target object using at least one of a

- 20 focus mechanism and a zoom mechanism. However, Dunton does teach the camera being initially positioned at a starting index of a scan track ('284 – col. 4 lines 35-48), the camera moved in a lateral direction by a motor driven apparatus ('284 – col. 4 lines 51-

54), and the system using focusing information from the lens ('284 – col. 3 lines 42-43; col. 4 lines 26-30.)

Nevertheless, Kaye teaches a similar camera system wherein said support device includes a cradle (fig. 1 indicator 40) and as well a proper focusing and zooming 5 prior to image capturing (col. 9 lines 29-41.) It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the cradle and camera operation as taught by Kaye, with the system as taught by Dunton and Chen. One of ordinary skill in the art at the time the invention was made would be motivated to combine these teachings so that stable camera operation could begin in a state which 10 provides a point of reference for later image manipulation, as well as in a state where the images may be captured clearly, and within a desired magnification.

Regarding claim 6, Dunton, Chen and Kaye disclose all the limitations of claim 6 (see the 103(a) rejection to claim 5 supra), including teaching a system wherein a system user enters scan parameters into said video camera for performing said 15 scanning procedure, said scan parameters including at least one of a scan speed control, a scan direction control, a still frame time interval control, a scan overlap control, and a scan resolution control ('188 – col. 9 lines 5-19.)

Regarding claim 8, Dunton, Chen and Kaye disclose all the limitations of claim 8 (see the 103(a) rejection to claim 5 supra), including teaching a system wherein said 20 cradle begins traveling along said scan track during said scanning procedure, said video camera responsively beginning to capture and store video data that corresponds to said target object ('188 – col. 9 lines 33-46; '284 – fig. 2 and col. 4 lines 35-67.)

Regarding claim 9, Dunton, Chen and Kaye disclose all the limitations of claim 9 (see the 103(a) rejection to claim 8 supra), including teaching a system wherein a display manager in said video camera displays an active scan mode indicator on a user interface of said video camera during said scanning procedure, said active scan mode indicator displaying user settings for said scan parameters ('188 – col. 8 line 50 – col. 9 line 4; '744 – col. 7 lines 54-64.) Official Notice is taken regarding the fact that camera displays are a commonly found means of output of data and images, as well as the practice of user settings and camera parameters being outputted onto a camera's display; concepts which are well known and expected in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to indicate user settings for given scan parameters, so that a user may be able to confirm correct or incorrect settings early in a scan session, as well as be able to know their current status in the event they need to be altered.

Regarding claim 10, Dunton, Chen and Kaye disclose all the limitations of claim 10 (see the 103(a) rejection to claim 8 supra), including teaching a system wherein said video camera captures said video data using a complete video frame format in which a series of sequential video frames each contain a complete pixel set ('284 – col. 6 line 20 – col. 7 line 16.)

Regarding claim 11, Dunton, Chen and Kaye disclose all the limitations of claim 11 (see the 103(a) rejection to claim 8 supra), including a teaching a system wherein a motion detector captures scan motion data corresponding to movements of said video camera, said motion detector providing said scan motion data to said scanning manager

of said video camera, said scan motion data including at least one of a scan speed and a scan direction ('284 – col. 4 lines 25-34 and 49-62.)

Regarding claim 14, Dunton, Chen and Kaye disclose all the limitations of claim 14 (see the 103(a) rejection to claim 11 supra), including a teaching a system wherein 5 said scanning manager extracts an initial still frame of said target object from said video data that is captured by said video camera during said scanning procedure ('284 – col. 6 lines 20-25; col. 7 lines 35-43.)

Regarding claims 25-26, 28-31 and 34, although the wording is different, the material is considered substantively equivalent to claims 5-6, 8-11 and 14, respectively, 10 as discussed above.

Claims 12 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dunton et al. (US 6,304,284), Chen (US 6,552,744) and Kaye (US 5,497,188) as applied to claims 11 and 31 above, and further in view of Sussman et al. (US 15 4,793,812.)

Regarding claim 12, Dunton, Chen and Kaye teach all the limitations of claim 12 (see the 103(a) rejection to claim 11 supra), except for a direct teaching of a system wherein said motion detector generates said scan speed by monitoring a rotational velocity sensor for at least one wheel upon which said cradle travels during said 20 scanning procedure. However, Kaye does teach at least one wheel upon which said cradle travels during said scanning procedure that receives motion control that is related to camera position (col. 9 lines 43-45.) Additionally, Sussman teaches monitoring of

rotational velocity of rollers to determine scan speed (col. 5 lines 16-26; col. 6 lines 24-

31.) It would have been obvious to one of ordinary skill in the art at the time the invention was made to monitor a rotational velocity sensor for at least one wheel during a scanning procedure as taught by Sussman, in conjunction with the motion detector of 5 the system as taught by Dunton, Chen and Kaye. One of ordinary skill in the art at the time of the invention would have been motivated to combine these teachings in order to correlate the scan speed with the actual speed of the camera as it moves, so that the images are acquired at appropriate timing and the required amount of overlap between scanned images is achieved. The monitored information may also be employed in the 10 later stitching process to associate concurrent images, without requiring the matching of key points on the images.

Regarding claim 32, although the wording is different, the material is considered substantively equivalent to claim 12 as discussed above.

15 **Claims 13, 15-18, 33 and 35-38** are rejected under 35 U.S.C. 103(a) as being unpatentable over Dunton et al. (US 6,304,284), Chen (US 6,552,744) and Kaye (US 5,497,188) as applied to claim 11 above, and further in view of Bohn et al. (US 6,002,124.)

Regarding claim 13, Dunton, Chen and Kaye teach all the limitations of claim 13 20 (see the 103(a) rejection to claim 11 supra), except for directly teaching a system wherein said scan speed is expressed by a formula:

$$\text{Scan Speed} = \frac{\text{Non-Overlapped Scan Distance}}{\text{Time Interval}}$$

where said Non-Overlapped Scan Distance is a length of a non-overlapped region of an immediately-preceding still frame prior to a start of a current still frame, and said Time Interval is a length of time required by said cradle to transport said video camera across said Non-Overlapped Scan Distance to said start of said current still

- 5 frame. Nevertheless, Bohn teaches scanning of an image to be stitched, where the scan speed is equated in relation to the sampling time of a frame and overlap between frames (col. 11 lines 44-58.) In light of the teachings in Bohn, it would have been obvious to one of ordinary skill in the art at the time the invention was made to calculate scan speed via overlap distance in relation to time, within the system as taught by
- 10 Dunton, Chen and Kaye, in order to properly relocate the camera between images.

Regarding claim 15, Dunton, Chen and Kaye teach all the limitations of claim 15 (see the 103(a) rejection to claim 14 supra), except for directly teaching a system wherein said scanning manager extracts a current still frame of said target object from said video data at a pre-determined time interval during said scanning procedure.

- 15 Nevertheless, Bohn teaches scanning of an image to be stitched, in which a current still frame of a target object to be scanned is extracted at a pre-determined time interval during said scanning procedure (col. 11 lines 44-48.) It would have been obvious to one of ordinary skill in the art at the time the invention was made to integrate the sampling interval as taught by Bohn, within the scanning manager of the system as
- 20 taught by Dunton, Chen and Kaye. One of ordinary skill in the art at the time the invention was made would be motivated to combine these teachings so that the images later employed in the stitching process will possess the requisite amount of overlap.

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Regarding claim 16, Dunton, Chen, Kaye, and Bohn teach all the limitations of claim 16 (see the 103(a) rejection to claim 15 supra), including a teaching a system wherein said scanning manager determines an overlap region between said initial still frame and said current still frame by referencing said scan motion data ('284 col. 4 line 5 49 – col. 5 line 21.)

Regarding claim 17, Dunton, Chen, Kaye, and Bohn teach all the limitations of claim 17 (see the 103(a) rejection to claim 16 supra), including a teaching a system wherein said scanning manager calculates an overlap length for said overlap region according to a formula:

10 Overlap Length=Still Frame Length-Non-Overlapped Scan Distance

where said Overlap Length is a distance from a start of said overlap region to an end of said overlap region, said Non-Overlapped Scan Distance is a length of a non-overlapped region of said initial still frame prior to a start of said current still frame, and Still Frame Length is a constant length of one of said still frames ('284 col. 4 line 49 –

15 col. 5 line 6; col. 6 line 43 – col. 7 line 16.)

Regarding claim 18, Dunton, Chen, Kaye, and Bohn teach all the limitations of claim 18 (see the 103(a) rejection to claim 16 supra), including a teaching a system wherein a stitching software program combines (col. 6 lines 45-46, col. 7 lines 7-11) said video data in said overlap region between said initial still frame and said current still 20 frame to provide greater image detail and increased image resolution, said stitching software program thereby generating a composite still image of said target object from

said initial still frame and said current still frame ('284 col. 4 line 49 – col. 5 line 21; col. 6 line 20 – col. 7 line 43.)

Regarding claims 33 and 35-38, although the wording is different, the material is considered substantively equivalent to claims 13 and 15-18, respectively, as discussed
5 above.

Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dunton et al. (US 6,304,284), Chen (US 6,552,744) and Kaye (US 5,497,188), in view of Anderson (US 6,177,957.)

10 Regarding claim 41, Dunton, Chen and Kaye teach a system for creating a still image with a video camera, which performs the steps of: transporting said video camera across said target object with a support device during a scanning procedure ('284 col. 4 lines 49-64); analyzing scan motion data from said scanning procedure with a scanning manager ('284 col. 6 lines 20-23); and generating still frames corresponding to said
15 target object by utilizing said scanning manager ('284 col. 4 lines 26-30.) However, although the inputting of programs for the purpose of changing or customizing the system is taught ('188 col. 9 lines 5-20), neither Dunton, Chen or Kaye teach the above steps taking the form of program instructions within a computer-readable medium.

Anderson is found to teach putting operational steps, in the form of program
20 instructions, onto a computer readable medium (col. 13 lines 33-54, col. 14 lines 25-43.) It would have been obvious to one of ordinary skill in the art at the time of the invention to transfer the steps as taught by Dunton, Chen and Kaye, which are efiectuated by

processors within programmed devices, and due to their processor based execution,
are employed as programmed instructions, onto a computer readable medium
comprising program instructions as taught by Anderson, so that they may be loaded as
firmware onto a device to update or restore device functionality without having to update
5 or replace device hardware.

Allowable Subject Matter

Claims 7 and 27 are objected to as being dependent upon a rejected base
claim, but would be allowable if rewritten in independent form including all of the
10 limitations of the base claim and any intervening claims.

Regarding claims 7 and 27, the prior art is not found to teach or fairly suggest, in
combination with the claims from which dependence is derived, the user entering a scan
parameter that includes a negative overlap setting and a corresponding error warning
generated on a user interface when a system user enters said invalid negative overlap
15 setting.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time
policy as set forth in 37 CFR 1.136(a).

20 A shortened statutory period for reply to this final action is set to expire THREE
MONTHS from the mailing date of this action. In the event a first reply is filed within
TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later

- 5 than SIX MONTHS from the mailing date of this final action.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary C. Vieux whose telephone number is 571-272-

- 10 7318. The examiner can normally be reached on Monday - Friday, 8:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 571-272-7308. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

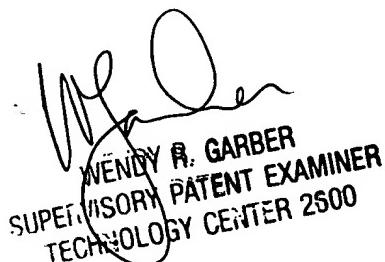
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- 15 Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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- 20 Business Center (EBC) at 866-217-9197 (toll-free).



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